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# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 04372536  
PUBLICATION DATE : 25-12-92

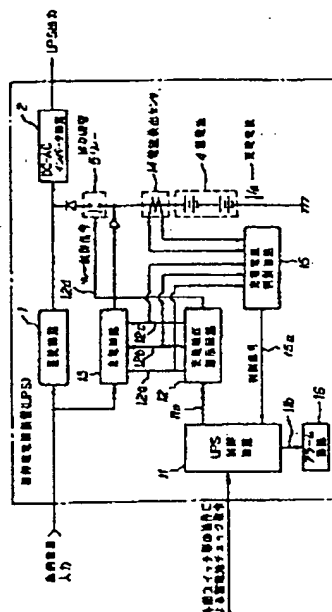
APPLICATION DATE : 19-06-91  
APPLICATION NUMBER : 03147623

APPLICANT : OMRON CORP;

INVENTOR : FUJII YUJI;

INT.CL. : H02J 7/34 G01R 31/36 H02J 7/00

TITLE : ELECTRONIC EQUIPMENT USING STORAGE BATTERY



ABSTRACT : PURPOSE: To detect the state of a storage battery automatically without requiring time or labor from a user, etc., and without discharging the storage battery to exert an influence upon the life of the battery.

CONSTITUTION: According to instructions of a UPS(uninterruptible power supply) control circuit 11, a charging voltage instruction circuit 12 successively gives a charging circuit 13 instructions to apply a voltage lower than the optimum charging voltage of the storage battery 4, the optimum charging voltage and a voltage higher than the optimum charging voltage to the storage battery 4, and the charging circuit 13 charges the storage battery 4 according to these instructions. A current detection sensor 14 detects the value of a charging current  $i_B$  supplied to the storage battery 4 at that time and sends the value to a charging current discrimination circuit 15. The charging current discrimination circuit 15 compares the value of the charging current  $i_B$  with a charge completion current value obtained when the storage battery 4 is normal and in a charge completion state, discriminates the state of the storage battery, i.e., a normal state, overdischarge state or deterioration state caused by a high impedance deterioration, etc., and sends a discrimination signal to the UPS control circuit 11.

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